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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,733

10/17/2005

Yukie Mori

124684

3453

25944 7590 07/22/2008  
OLIFF & BERRIDGE, PLC  
P.O. BOX 320850  
ALEXANDRIA, VA 22320-4850

EXAMINER
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BAISA, JOSELITO SASIS

ART UNIT	PAPER NUMBER
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2832

MAIL DATE	DELIVERY MODE
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07/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/541,733

Applicant(s)

MORI ET AL.

Examiner

JOSELITO BAISA

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 10-12 and 21-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 10-12 and 21-32 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 15 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/14/08.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsumune [JP2001085203] in view of Hinokuma et al. [6495290].

Regarding claims 1 and 10, Mitsumune discloses an electrode couple, a conductive member comprising a resin including an electric conductor, wherein the electric conductor includes fullerenes; fullerenes concentration is 0.01 to 100 pts. wt.(0.5 ppm to 10 mass % inclusive) [Abstract].

Mitsumune discloses the instant claimed invention discussed above except for the fullerenes is a residual material of a synthetic carbonaceous material generated in a preparation process from which at least a part of the fullerenes is removed.

Hinokuma discloses a synthetic carbonaceous material (fullerenes derivative) fullerenes generated in the preparation process from which at least a part of the fullerenes is removed [Abstract].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use synthetic carbonaceous material as taught by Hinokuma to the PTC of Mitsumune.

The motivation would have been to provide a strong electrochemical device that is usable in a wide temperature range including ordinary temperature [Abstract].

Regarding claims 2 and 11, Hinokuma discloses the synthetic a carbonaceous material including the fullerenes is generated via a predetermined arc discharging method or a predetermined combustion method [Col. 5, Lines 10-18].

Regarding claims 3 and 12, Mitsumune in view of Hinokuma disclose the preparation process of fullerene involving oxygen and hydrogen atom except for the claimed conductor includes oxygen atoms of 0.5 to 30 mass% and hydrogen atoms of 0.05 to 1 mass%. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the oxygen and hydrogen content since applicant has not disclosed that a oxygen atoms of 0.5 to 30 mass% and hydrogen atoms of 0.05 to 1 mass% solves any stated problem or is for any particular purpose and it appears that the invention of Mitsumune in view of Hinokuma would perform equally well with the Applicant's invention.

Regarding claims 4 and 5, Mitsumune discloses a plurality of conductor particles having resin particles formed from the resin and a conductive layer formed on the surface of the resin particles and formed from the electric conductor are piled up; wherein the electric conductor is dispersed in the resin [Paragraph 10-12].

Art Unit: 2832

Claims 21-24, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsumune [JP2001085203] in view of Shirai et al. [20040048127A1].

Regarding claims 21 and 29, Mitsumune discloses resin including an electric conductor (electrode and conductive member) includes mainly at least a compound having carbon cluster ( $C_{60}$ ) [Paragraph 9]. Carbon cluster ( $C_{60}$ ) has a 6:5 bond (5-membered ring and 6-membered ring).

Mitsumune discloses the instant claimed invention discussed above except for the carbon cluster was mentioned to have at least one 5-membered ring, at least one 6-membered ring and has an open end.

Shirai discloses carbon clusters that are by-product in the fullerene manufacturing process employing arc discharge has often open end structure [Page 4, Paragraph 55].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use carbon cluster that have at least one 5-membered ring, at least one 6-membered ring and has an open end as taught by Shirai to the structure of Mitsumune.

The motivation would have been this characteristic provides higher reactivity of the electrochemical device [Page 4, Paragraph 55].

Regarding claims 22, 26, 30 and 32, Mitsumune in view of Shirai disclose the preparation process of fullerene involving oxygen and hydrogen atom except for the claimed conductor includes oxygen atoms of 0.5 to 30 mass% and hydrogen atoms of 0.05 to 1 mass%. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the oxygen and hydrogen content since applicant has not disclosed that a oxygen atoms of 0.5 to

Art Unit: 2832

30 mass% and hydrogen atoms of 0.05 to 1 mass% solves any stated problem or is for any particular purpose and it appears that the invention of Mitsumune in view of Mitsumune would perform equally well with the Applicant's invention.

Regarding claims 23, 24, 27 and 28, Mitsumune discloses a plurality of conductor particles having resin particles formed from the resin and a conductive layer formed on the surface of the resin particles and formed from the electric conductor are piled up; wherein the electric conductor is dispersed in the resin [Paragraph 10-12].

Regarding claims 25 and 30, Mitsumune discloses resin including an electric conductor (electrode and conductive member) includes mainly at least a compound having carbon cluster [Paragraph 9].

Mitsumune discloses the instant claimed invention discussed above except for the carbonaceous compound having a non-peak distribution due to its amorphous structure in a region where  $2\theta$  is 30 degree or less in an X-ray diffraction spectrum.

Shirai discloses carbon derivative that has amorphous structure whose impedance behavior is similar to the carbon compound measured in an X-ray diffraction spectrum [Col. 26, Lines 5-27].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the carbon compound taught by Shirai to the structure of Mitsumune.

Art Unit: 2832

The motivation would have been for the electrical characteristic (impedance and conductivity) of the carbonaceous compound cluster be used in electrochemical devices [Col. 26, Lines 5-16].

*Response to Argument*

Applicant's arguments with respect to claims 1-5, 10-12 and 21-32 have been considered but are moot in view of the new ground(s) of rejection.

Hinokuma discloses a synthetic carbonaceous material (fullerenes derivative) fullerenes generated in the preparation process from which at least a part of the fullerenes is removed.

Shirai discloses carbon clusters that are by-product in the fullerene manufacturing process employing arc discharge has often open end structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselito Baisa whose telephone number is (571) 272-7132. The examiner can normally be reached on M-F 5:30 am to 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elvin G Enad/  
Supervisory Patent Examiner, Art Unit 2832

Joselito Baisa  
Examiner  
Art Unit 2832

/J. B./  
Examiner, Art Unit 2832

<b>Notice of References Cited</b>	Application/Control No. 10/541,733	Applicant(s)/Patent Under Reexamination MORI ET AL.	
	Examiner JOSELITO BAISA	Art Unit 2832	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,495,290	12-2002	Hinokuma et al.	429/231.8
*	B	US-2004/0048127	03-2004	Shirai et al.	429/033
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

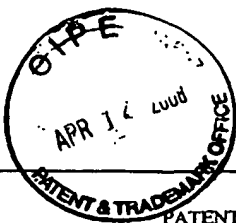
**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Sheet 1 of 1Form PTO-1449  
(REV. 1/06)US Dept. of Commerce  
PATENT & TRADEMARK OFFICEATTY DOCKET NO.  
124684APPLICATION NO.  
10/541,733

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT(S)  
Yukie MORI et al.FILING DATE  
October 17, 2005GROUP  
2832

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Date	Name

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Date	Country	With English Abstract	With English Translation
/JB/	1	JP-A-07-267618	10/17/1995	JAPAN	X	X
/JB/	2	WO 01/17900 A1	03/15/2001	WIPO	X	

## OTHER DOCUMENTS

Examiner Initials	Cite No.	(Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER

/Joselito Baisa/

DATE CONSIDERED

07/17/2008

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: April 14, 2008

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